Solutia Inc.
575 Maryville Centre Drive
St. Louis, Missouri 63141

Tel: 314-674-3312
Fax: 314-674-8808

gmrina@eastman.com

May 13, 2014

MS. Tammy Moore - LU-9J
U.S. EPA Region V
Corrective Action Section
77 West Jackson Boulevard
Chicago, IL 60604-3507

Re: Route 3 Drum Site Groundwater Monitoring Program
1st Quarter 2014 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

Dear Ms. Moore:

Enclosed please find the Route 3 Drum Site Groundwater Monitoring Program 1st Quarter 2014 Data Report for Solutia Inc.'s W. G. Krummrich Plant, Sauget, IL.

If you have any questions or comments regarding this report, please contact me at (314) 674-3312 or gmrina@eastman.com

Sincerely,

Gerald M. Rinaldi
Manager, Remediation Services

Enclosure

cc: Distribution List

DISTRIBUTION LIST

Route 3 Drum Site Groundwater Monitoring Program
1st Quarter 2014 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

USEPA

Stephanie Linebaugh
USEPA Region 5 - SR6J, 77 West Jackson Boulevard, Chicago, IL 60604

Solutia

Donn Haines 500 Monsanto Avenue, Sauget, IL 62206-1198

1ST QUARTER 2014
DATA REPORT

ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING

SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

Prepared for
Solutia Inc.
575 Maryville Centre Drive
St. Louis, Missouri 63141

May 2014

URS Corporation
1001 Highland Plaza Drive West
Suite 300
St. Louis, MO 63110
(314) 429-0100
Project # 21563600.00003

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1.0 INTRODUCTION

Solutia Inc. (Solutia) is conducting groundwater monitoring activities as outlined in the Revised Illinois Route 3 Drum Site Operation and Maintenance Plan (Solutia, 2008). The Illinois Route 3 Drum Site (Site) is an area associated with the Solutia W.G. Krummrich (WGK) Facility located in Sauget, Illinois that is subject to a RCRA Administrative Order on Consent (AOC) entered into by the U.S. EPA and Solutia on May 3, 2000. This report presents the results of the sampling event completed in 1st Quarter 2014 (1Q14). The Site is located in the area identified as "Lot F" in **Figure 1**.

During the 1Q14 sampling event, groundwater samples were collected from two Shallow Hydrogeologic Unit (SHU) monitoring wells, designated GM-31A and GM-58A (**Figure 2**), located hydraulically downgradient of the Site**.** Samples from each well were analyzed for select semivolatile organic compounds (SVOCs) using EPA Method 8270D. In addition, samples were collected from both wells for evaluation of monitored natural attenuation (MNA). The types of natural attenuation processes active at the site will be determined by measurements of the following key geochemical parameters: alkalinity, carbon dioxide, chloride, dissolved oxygen (DO), ferrous iron, total and dissolved iron, total and dissolved manganese, methane, nitrate, sulfate, total and dissolved organic carbon, and oxidation-reduction potential (ORP).

2.0 FIELD PROCEDURES

URS Corporation (URS) personnel collected groundwater level measurements on January 30 and 31, 2014 and conducted the 1Q14 Illinois Route 3 Drum Site groundwater sampling on February 13, 2014[1]. Groundwater samples were collected from two monitoring wells during the 1Q14 sampling event. This section summarizes the field investigative procedures.

Groundwater Level Measurements - An oil/water interface probe was used to measure depth to static groundwater levels, thickness of non-aqueous phase liquid (NAPL) if present, and total well depth to 0.01 feet. Depth-to-groundwater measurements for the 1Q14 sampling event are presented in **Table 1**. NAPL was not detected in either of the monitoring wells.

Groundwater Sampling - Low-flow sampling techniques were used for groundwater sample collection. At each monitoring well, disposable, low-density polyethylene tubing was attached to a submersible pump (GM-31A) or peristaltic pump (GM-58A), and was then lowered into the well to the middle of the screened interval. Monitoring wells were purged at a rate of approximately 500 mL/minute to minimize drawdown. If significant drawdown occurred, flow rates were reduced.

[1] The January 30 and 31 gauging was part of a comprehensive event which included monitoring wells associated with other WGK programs. Groundwater levels in the subject wells were gauged again on February 13 prior to sampling.

Drawdown was measured periodically throughout purging to ensure that it did not exceed 25% of the distance between the pump intake and the top of the screen. Once the flow rate and drawdown were stable, field measurements were collected approximately every two minutes. Purging of a well was considered complete when the following water quality parameters remained stable over three consecutive flow-through cell volumes:

Parameter	Stabilization Guidelines
Dissolved Oxygen (DO)	+/- 10% or +/-0.2 mg/L, whichever is greatest
Oxidation-Reduction Potential (ORP)	+/- 20 mV
pH	+/- 0.2 units
Specific Conductivity	+/- 3%

Sampling commenced upon completion of purging. Prior to sample collection, the flow-through cell was bypassed to allow for collection of uncompromised groundwater. Samples were collected at a flow rate less than or equal to the rate at which stabilization was achieved. Sample containers were filled based on laboratory analysis to be performed. Bottles were filled in the following order:

- Gas Sensitive Parameters (e.g., carbon dioxide, methane)
- Semivolatile Organic Compounds (SVOCs)
- General Chemistry (i.e., alkalinity, chloride, total and dissolved iron, total and dissolved manganese, nitrate, sulfate, total and dissolved organic carbon, and ferrous iron)

Samples for analysis of ferrous iron, dissolved iron, dissolved organic carbon, and dissolved manganese were filtered in the field using in-line 0.2 micron disposable filters, represented by a notation of “F (0.2)” in the sample nomenclature.

Quality Assurance/Quality Control (QA/QC) samples consisting of analytical duplicates (AD) were collected at a rate of 10% and matrix spike/matrix spike duplicates (MS/MSD) were collected at a rate of 5%. One duplicate and one MS/MSD sample were collected. Additionally, one equipment blank was collected and analyzed.

Each sample was labeled immediately following collection. The sample identification system used for each sample involved the following nomenclature “GM-##A-MMYY-QAC” where:

- **GM-##A** – Geraghty & Miller (GM) monitoring well location and number
- **MMYY** – Month and year of sampling quarter, e.g.: February (1st Quarter), 2014 (0214)
- **QAC** – denotes QA/QC samples (when applicable):
  - **AD** – analytical duplicate
  - **MS or MSD** – Matrix Spike or Matrix Spike Duplicate

Upon collection and labeling, sample containers were immediately placed inside an iced cooler, packed in such a way as to help prevent breakage and maintain inside temperature at or below approximately 4^{o}C. Field personnel recorded the project identification and number, sample description/location, required analysis, date and time of sample collection, type and matrix of sample, number of sample containers, analysis requested/comments, and sampler signature/date/time, with permanent ink on a chain-of-custody (COC). Coolers were sealed between the lid and sides with a custody seal, and then shipped to TestAmerica Laboratories, Inc. in Savannah, Georgia (TestAmerica) by means of overnight delivery service. Sampling data forms are included in **Appendix A**. A copy of the COC form is included in **Appendix B**.

Field personnel and equipment were decontaminated to ensure the health and safety of those present, maintain sample integrity, and minimize movement of contamination between the work area and off-site locations. Equipment used on-site was decontaminated prior to beginning work, between sampling locations and/or uses, and prior to demobilizing from the site. Non-disposable purging and sampling equipment was decontaminated between each sample acquisition by washing with a Liquinox® or equivalent detergent wash and a distilled water rinse. Personnel and small equipment decontamination was performed at the sample locations. Disposable sampling equipment, such as gloves were collected and bagged on a daily basis and managed in accordance with Solutia procedures. Purge water was containerized and handled per Solutia procedures.

3.0 LABORATORY PROCEDURES

Samples were analyzed by TestAmerica Savannah for certain 40 CFR 264 Appendix IX SVOCs, and MNA parameters per the Route 3 Drum Site O&M Plan (Solutia 2008), using the following methodologies:

- SVOCs, via USEPA SW-846 Method 8270D - The constituents of concern (COCs) identified by the USEPA are biphenyl, 2,4-dichlorophenol, dinitrochlorobenzene, nitrobenzene, 2-nitrobiphenyl, 3-nitrobiphenyl, 4-nitrobiphenyl, 2-nitrochlorobenzene, 3-nitrochlorobenzene, 4-nitrochlorobenzene, pentachlorophenol, and 2,4,6-trichlorophenol.
- MNA parameters consisting of alkalinity (310.1), carbon dioxide (310.1), chloride (325.2), total and dissolved iron and manganese (6010C), dissolved organic carbon (415.1), nitrate (353.2), sulfate (375.4), dissolved gases (RSK 175), and total organic carbon (TOC) (415.1).

Laboratory results were provided in electronic and hard copy formats.

4.0 QUALITY ASSURANCE

Analytical data were reviewed for quality and completeness as described in the Revised Illinois Route 3 Drum Site Operations and Maintenance Plan. Data qualifiers were added, as

appropriate, and are included on the data tables and the laboratory report. The Quality Assurance report is included as **Appendix C**. The laboratory report along with the data review report is included in **Appendix D**.

A total of five groundwater samples (two investigative groundwater samples, one field duplicate pair, and one MS/MSD pair) were collected. All samples requested for analyses were analyzed by TestAmerica for SVOCs and MNA parameters by USEPA SW-846 Methods. Additionally, one equipment blank was collected and analyzed by TestAmerica. The results for the various analyses were submitted as sample delivery group (SDG) KOM023 containing results for GM-31A and GM-58A.

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA 2008), USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 2010) and the Revised Illinois Route 3 Drum Site Operation and Maintenance Plan, (Solutia 2008). Based on the above mentioned criteria, results reported for the analyses performed were accepted for their intended use. Acceptable levels of accuracy and precision, based on MS/MSD, LCS, surrogate and field duplicate data were achieved for this SDG to meet the project objectives. Completeness, which is defined to be the percentage of analytical results which are judged to be valid, including estimated detect/non-detect (**J/UJ**) data, was 100 percent.

5.0 OBSERVATIONS

SVOCs were detected in groundwater samples collected from monitoring wells GM-31A and GM-58A during the 1Q14 sampling event. 2,4,6-Trichlorophenol was detected at concentrations of 17/22 µg/L (GM-31A and duplicate) and 14 µg/L (GM-58A). GM-31A and its duplicate sample also contained 2-Nitrobiphenyl at concentrations of 14/18 µg/L and GM-58A contained 2-Chloronitrobenzene/4-Chloronitrobenzene at a concentration of 66 µg/L. Each of these constituents have been detected in previous sampling events and 1Q14 concentrations fall within the historical range. A summary of SVOC detections is provided in **Table 2**, with MNA results provided in **Table 3**.

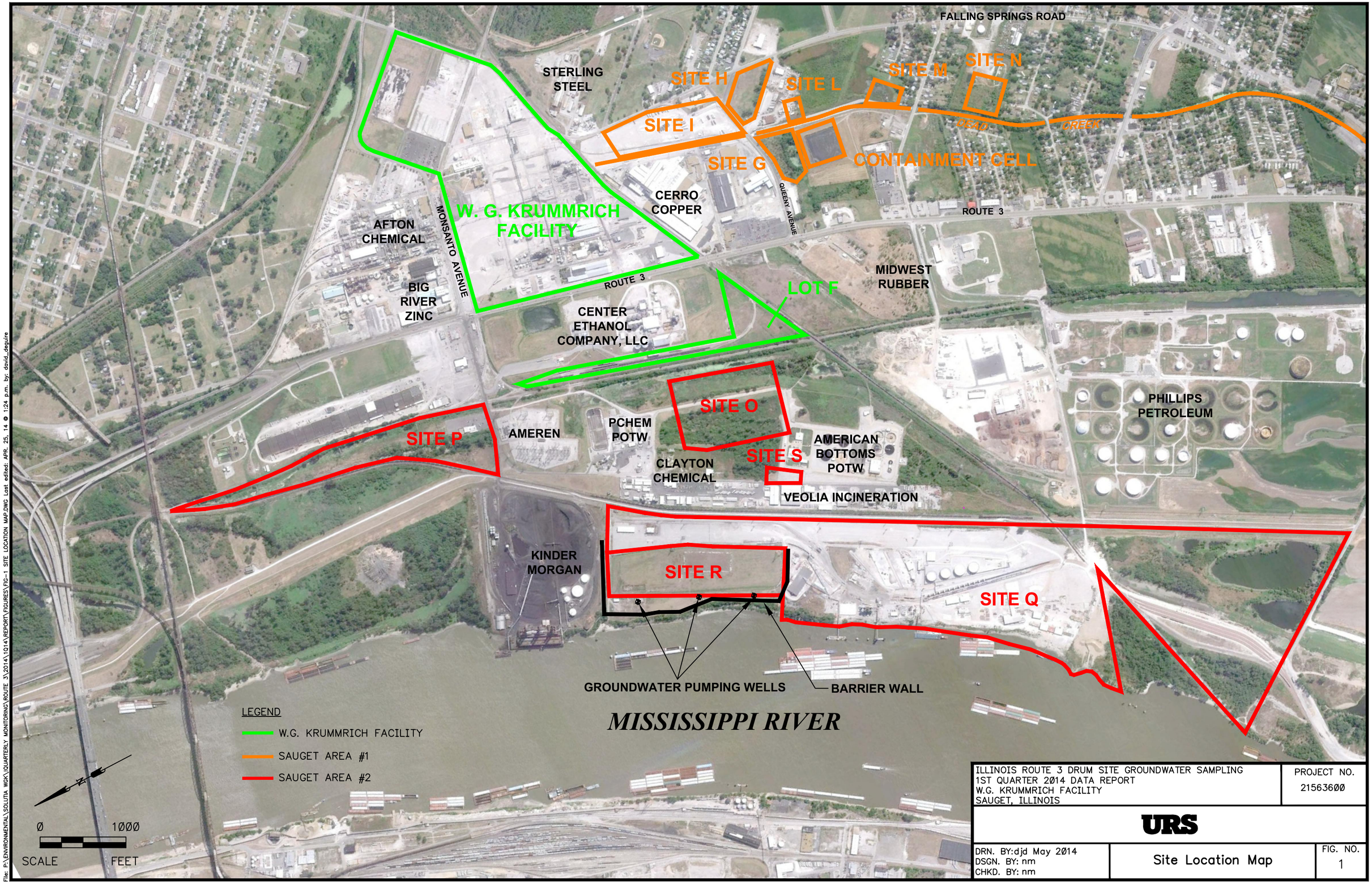
6.0 REFERENCES

Solutia Inc., 2008. Revised Illinois Route 3 Drum Site Operation and Maintenance Plan, W.G. Krummrich Facility, Sauget, IL, May 2008.

U.S. Environmental Protection Agency (USEPA), 2010. Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Data Review.

U.S. Environmental Protection Agency (USEPA), 2008 National Functional Guidelines for Superfund Organic Methods Data Review.

Figures



ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING
1ST QUARTER 2014 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21563600

URS

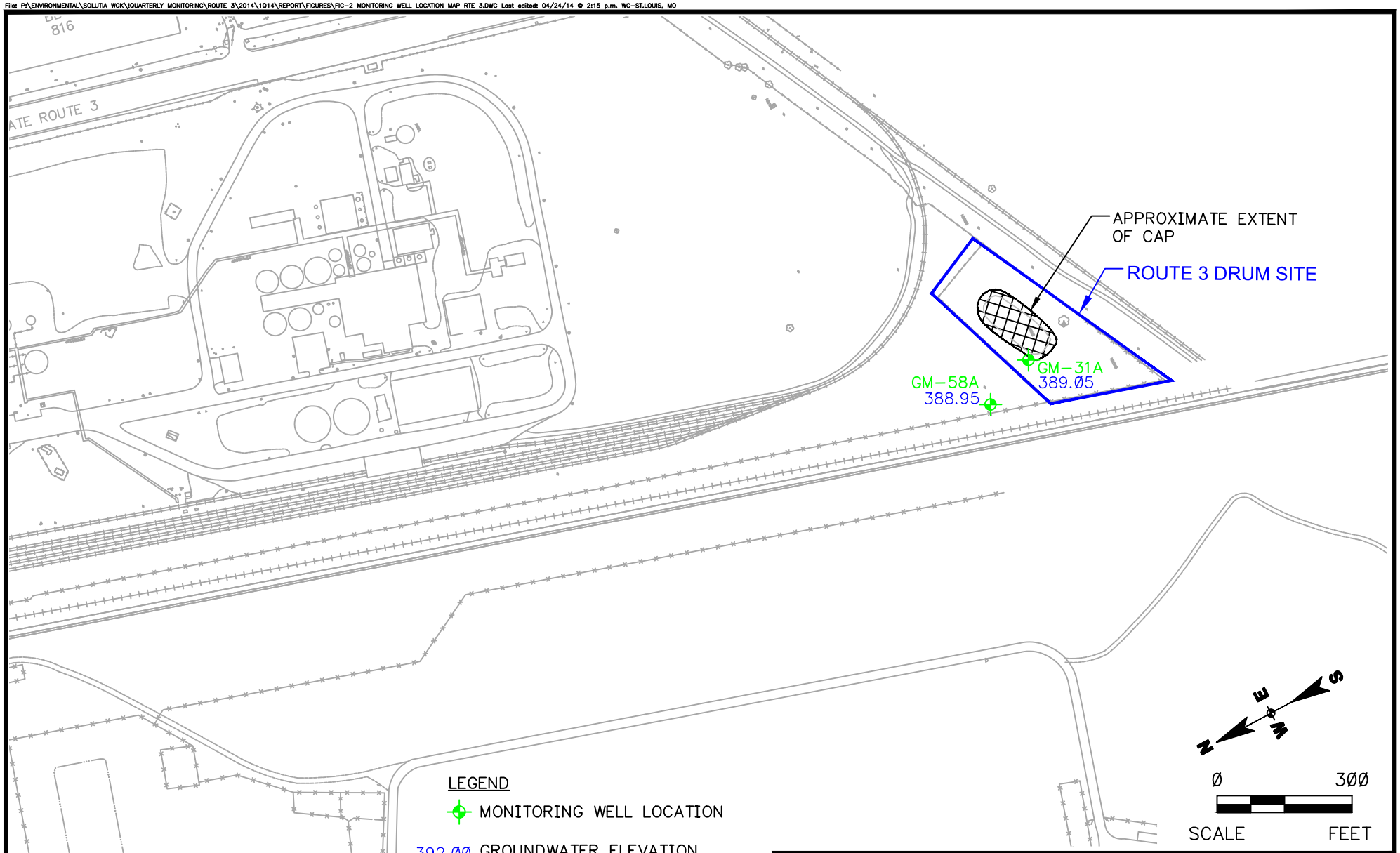
DRN. BY:djd May 2014
DSGN. BY: nm
CHKD. BY: nm

Site Location Map

FIG. NO. 1

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\ROUTE 3\2014\1Q14\REPORT\FIGURES\FIG-1 SITE LOCATION MAP.DWG Last edited: APR. 25, 14 @ 1:24 p.m. by: david_deguire

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\ROUTE 3\2014\1Q14\REPORT\FIGURES\FIG-2 MONITORING WELL LOCATION MAP RTE 3.DWG Last edited: 04/24/14 @ 2:15 p.m. WC-ST.LOUIS, MO



LEGEND

MONITORING WELL LOCATION

392.ØØ GROUNDWATER ELEVATION (FT NAVD)

NOTES:

1. REFER TO TABLE 1 FOR MONITORING WELL CONSTRUCTION INFORMATION.

ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING 1ST QUARTER 2Ø14 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS		PROJECT NO. 2156360Ø
URS		
DRN. BY:djd May 2Ø14 DSGN. BY: nm CHKD. BY: nm	Monitoring Well Location and Groundwater Elevation Map	FIG. NO. 2

Tables

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						January 30-31, 2014			
	Ground Elevation* (feet)	Casing Elevation* (feet)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Top of Screen Elevation* (feet)	Bottom of Screen Elevation* (feet)	Depth to Water (feet btoc)	NAPL Thickness (feet)	Depth to Bottom** (feet btoc)	Water Elevation* (feet)
Shallow Hydrogeologic Unit (SHU 395-380 feet NAVD 88)										
GM-31A	416.63	418.63	19	39	397.63	377.63	29.58	-	40.31	389.05
GM-58A	412.24	414.24	19.4	39.4	392.84	372.84	25.29	-	40.85	388.95

Notes:

* - Elevation based upon North American Vertical Datum (NAVD) 88 datum

** - Total depths are measured annually during the first quarter of each year

bgs - below ground surface

btoc - below top of casing

Table 2
Groundwater Analytical Results

Sample ID	Sample Date	1,1'-Biphenyl (ug/L)	1-Chloro-2,4-Dinitrobenzene (ug/L)	2,4,6-Trichlorophenol (ug/L)	2,4-Dichlorophenol (ug/L)	2-Chloronitrobenzene/ 4-Chloronitrobenzene (ug/L)	2-Nitrobiphenyl (ug/L)	3,4-Dichloronitrobenzene (ug/L)	3-Nitrobiphenyl (ug/L)	3-Nitrochlorobenzene (ug/L)	4-Nitrobiphenyl (ug/L)	Nitrobenzene (ug/L)	Pentachlorophenol (ug/L)
Shallow Hydrogeologic Unit (SHU 395-380 ft NAVD 88)													
GM-31A-0214	2/13/2014	<9.6	<9.6	**17**	<9.6	<19	**14**	<9.6	<9.6	<9.6	<9.6	<9.6	<48
GM-31A-0214-AD	2/13/2014	<10	<10	**22**	<10	<20	**18**	<10	<10	<10	<10	<10	<50
GM-58A-0214	2/13/2014	<9.9	<9.9	**14**	<9.9	**66**	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<50

Notes:
µg/L = micrograms per liter
< = Result is non-detect, less than the reporting limit given.
BOLD indicates concentration greater than reporting limit.
AD = Analytical Duplicate

Table 3
Monitored Natural Attenuation Results Summary

Sample ID	Sample Date	Alkalinity (mg/L)	Carbon Dioxide (mg/L)	Chloride (mg/L)	Dissolved Oxygen (mg/L)	Ethane (ug/L)	Ethylene (ug/L)	Ferrous Iron (mg/L)	Iron (mg/L)	Iron, Dissolved (mg/L)	Manganese (mg/L)	Manganese, Dissolved (mg/L)	Methane (ug/L)	Nitrogen, Nitrate (mg/L)	Sulfate as SO4 (mg/L)	Total Organic Carbon (mg/L)	Dissolved Organic Carbon (mg/L)	ORP (mV)
Shallow Hydrogeologic Unit (SHU 395 - 380 ft NAVD 88)																		
GM-31A-0214	2/13/2014	320	39	29	0.00	<1.1	<1		0.47		0.8		44	3.8 J	110	3.9		27.52
GM-31A-F(0.2)-0214	2/13/2014							<0.03		0.13		0.88					3.7	
GM-58A-0214	2/13/2014	360	19	35	0.02	<1.1	<1		<0.05		0.92		<0.58	0.85 J	130	3.6		121.11
GM-58A-F(0.2)-0214	2/13/2014							<0.03		<0.05		0.95					3.5	

Notes:
DO and ORP were measured in the field using a In-Situ Troll 9500 equipped with a flow-thru cell. Values presented represent final measurements before sampling.
Ferrous Iron readings were measured in the field using a Hach DR-890 Colorimeter after the groundwater passed through a 0.2 µm filter
F(0.2) = Sample was filtered utilizing a 0.2 µm filter during sample collection
mg/L = milligrams per liter
ug/L = micrograms per liter
mV = millivolts
J = Concentration is an approximate value
< = Result is non-detect, less than the reporting limit given
A blank space indicates sample not analyzed for select analyte

Appendix A

Groundwater Purging and Sampling Forms

In-Situ Inc.

Troll 9000 | Low-Flow System
02/13/14 | ISI Low-Flow Log

Project Information:

Operator Name	sj mc
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - RT 3

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	44.32 [ft]
Pump placement from TOC	35 [ft]

Well Information:

Well Id	GM-31A
Well diameter	2 [in]
Well total depth	40.46 [ft]
Depth to top of screen	21 [ft]
Screen length	240 [in]
Depth to Water	29.75 [ft]

Pumping information:

Final pumping rate	500 [mL/min]
Flowcell volume	847.1 [mL]
Calculated Sample Rate	102 [sec]
Sample rate	102 [sec]
Stabilized drawdown	0 [in]

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	12:52:30	59.70	6.97	933.81	13.05	-0.02	36.52
	12:54:14	59.57	6.97	933.87	25.78	-0.02	34.29
	12:55:57	59.45	6.97	934.22	12.27	-0.03	31.98
	12:57:38	59.40	6.97	934.77	6.34	-0.03	29.75
	12:59:21	59.49	6.97	935.70	6.00	-0.03	27.52
Variance in last 3 readings	12:55:57	-0.12	0.00	0.35	-13.50	-0.01	-2.31
	12:57:38	-0.05	0.00	0.55	-5.93	-0.01	-2.23
	12:59:21	0.09	0.00	0.93	-0.34	0.00	-2.23

Notes:

In-Situ Inc.

Troll 9000 | Low-Flow System
02/13/14 | ISI Low-Flow Log

Project Information:

Operator Name	sj mc
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - RT 3

Pump Information:

Pump Model/Type	Peristaltic
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	50.58 [ft]
Pump placement from TOC	35 [ft]

Well Information:

Well Id	GM-58A
Well diameter	2 [in]
Well total depth	40.86 [ft]
Depth to top of screen	21.4 [ft]
Screen length	240 [in]
Depth to Water	25.72 [ft]

Pumping information:

Final pumping rate	500 [mL/min]
Flowcell volume	882.01 [mL]
Calculated Sample Rate	106 [sec]
Sample rate	106 [sec]
Stabilized drawdown	0 [in]

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm @25C]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	10:50:53	56.07	6.93	1063.23	0.83	0.04	117.57
	10:52:39	56.32	6.92	1063.45	0.90	0.03	118.47
	10:54:26	56.20	6.91	1065.79	0.19	0.03	119.58
	10:56:12	56.10	6.92	1068.40	0.06	0.02	120.47
	10:57:59	56.03	6.92	1072.44	1.57	0.02	121.11
Variance in last 3 readings	10:54:26	-0.12	-0.01	2.34	-0.71	-0.01	1.11
	10:56:12	-0.10	0.00	2.61	-0.13	-0.01	0.90
	10:57:59	-0.06	0.00	4.04	1.51	0.00	0.64

Notes:

Appendix B

Chain-of-Custody

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Bob Billman	Site Contact: Michael Corbett	Date: 2/13/14	COC No:
URS Corporation	Tel/Fax: (314) 743-4108	Lab Contact: Michele Kersey	Carrier: Fed Ex	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			21563600.00003
St. Louis, MO 63110	Calendar (C) or Work Days (W) C			
(314) 429-0100 Phone	TAT if different from Below Standard			SDG No.
(314) 429-0462 FAX	☐ 2 weeks			
Project Name: 1Q14 Route 3 GW Sampling	☐ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	SVOCs by 8270D	Total Fe/Mn by 6010C	Alk/CO2 by 310.1	Chloride by 325.2/Sulfate by 375.4	Methane by RSK 175	Nitrate by 353.2	TOC by 415.1	Dissolved Fe/Mn by 6010C	DOC by 415.1	Sample Specific Notes:
GM-31A-0214	2/13/14	1305	G	Water	13		2	1	1	1	3	2	3			
GM-31A-F(0.2)-0214		1305	G	Water	2	X								1	1	
GM-58A-0214		1110	G	Water	13		2	1	1	1	3	2	3			
GM-58A-F(0.2)-0214		1110	G	Water	2	X								1	1	
GM-58A-0214-MS		1110	G	Water	2		2									
GM-58A-0214-MSD		1110	G	Water	2		2									
GM-31A-0214-AD		1305	G	Water	2		2									
GM-31A-0214-EB		1210	G	Water	2		2									
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other							1	4	1	1	2	3,1	3	4	2	

680-98618 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

4.4/2.8/1.8°C
680-98618

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	URS	2/13/14 1630			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company: TA SV	Date/Time: 02/14/14 1007

Appendix C

Quality Assurance Report

QUALITY ASSURANCE REPORT

Solutia Inc.
W.G. Krummrich Facility
Sauget, Illinois

Illinois Route 3 Drum Site
1st Quarter 2014 Data Report

Prepared for

Solutia Inc.
575 Maryville Centre Drive
St. Louis, MO 63141

May 2014

URS Corporation
1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
Project # 21563600

1.0 INTRODUCTION

This Quality Assurance Report presents the findings of a review of analytical data for groundwater samples collected in February 2014 at the Illinois Route 3 Drum Site on the Solutia W.G. Krummrich Facility as part of the 1st Quarter 2014 sampling event. The samples were collected by URS Corporation personnel and analyzed by TestAmerica Laboratories located in Savannah, Georgia using USEPA methodologies. Samples were analyzed for certain semivolatile organic compounds (SVOCs) and monitored natural attenuation (MNA) parameters.

One hundred percent of the data were subjected to a data quality review (Level III validation). The Level III review was performed in order to confirm that the analytical data provided by TestAmerica were acceptable in quality for their intended use. A total of five samples (two investigative groundwater samples, one field duplicate, and one matrix spike and matrix spike duplicate (MS/MSD) pair) were collected. Additionally, one equipment blank was collected and analyzed by Test America. All samples requested for analyses were analyzed by TestAmerica utilizing the following USEPA SW-846 Methods:

- USEPA SW-846 Method 8270D for SVOCs
- USEPA SW-846 Method 6010C for Total and Dissolved Iron and Manganese

Samples were also analyzed for MNA parameters by the following methods:

- Method RSK-175 for Dissolved Gases (Ethane, Ethylene, and Methane)
- USEPA Method 310.1 for Alkalinity and Carbon Dioxide
- USEPA Method 325.2 for Chloride
- USEPA Method 415.1 for Total and Dissolved Organic Carbon
- USEPA Method 353.2 for Nitrogen, Nitrate
- USEPA Method 375.4 for Sulfate

Samples were reviewed following procedures outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA 2008) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 2010).

The above guidelines provided the criteria to review the data. Additional quantitative criteria are given in the analytical methods. Qualifiers assigned by the data reviewer have been applied to the laboratory report. The qualifiers indicate data that did not meet acceptance criteria and corrective actions were not successful or not performed.

The various qualifiers are explained in **Tables 1** and **2** below:

TABLE 1 Laboratory Data Qualifiers

Lab Qualifier	Definition
U	Indicates the analyte was analyzed for but not detected.
*	LCS, LCSD, MS, MSD, MD or surrogate exceeds the control limits.
E	Result exceeded the calibration range, secondary dilution required.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS, MSD: Spike recovery exceeds upper or lower control limits.
H	Sample was prepped or analyzed beyond the specified holding time.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

TABLE 2 URS Data Qualifiers

URS Qualifier	Definition
U	The analyte was analyzed for but was not detected.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy, precision, and representativeness (based on MS/MSD, LCS, surrogate compounds and field duplicate results) were achieved for this data set, except where noted in this report. In addition, analytical completeness, defined to be the percentage of analytical results which are judged to be valid, including estimated detect/non-detect (**J/UJ**) values was 100 percent, which meets the completeness goal of 95 percent.

The data review included evaluation of the following criteria:

Organics

- Data package completeness
- Laboratory case narrative/cooler receipt form and sample holding times
- Laboratory method blanks
- Laboratory control sample (LCS) recoveries
- Surrogate spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) sample recoveries and Relative Percent Difference (RPD) values
- Internal standard (IS) recoveries
- Laboratory Duplicate results
- Field duplicate results
- Results reported from dilutions
- Additional qualifications

Inorganics/General chemistry

- Data package completeness
- Laboratory case narrative/cooler receipt form and sample holding times
- Laboratory method blank
- LCS recoveries
- MS/MSD sample recoveries and matrix duplicate RPD values
- Field duplicate and laboratory duplicate results
- Results reported from dilutions
- Additional qualifications

2.0 RECEIPT CONDITION AND SAMPLE HOLDING TIMES

Sample holding time requirements for the analyses performed are presented in the methods and/or in the data review guidelines. Review of the sample collection, extraction and analysis dates involved comparing the chain-of-custody and the laboratory data summary forms for accuracy, consistency, and holding time compliance.

Extractions and/or analyses were completed within the recommended holding time requirements.

The cooler receipt form indicated that one of three coolers was received by the laboratory at a temperature of 1.8°C which is outside the 4°C ± 2°C criteria. The samples were received in good condition; therefore no qualification of data was required.

3.0 LABORATORY METHOD BLANK AND EQUIPMENT BLANK SAMPLES

Laboratory method blank samples evaluate the existence and magnitude of contamination problems resulting from laboratory activities. Laboratory method blank samples were analyzed at the method prescribed frequencies. Method blank samples were non-detect for all target analytes.

Equipment blank samples are used to assess the effectiveness of equipment decontamination procedures. The equipment blank sample was non-detect.

4.0 SURROGATE SPIKE RECOVERIES

Surrogate compounds are used to evaluate overall laboratory performance for sample preparation efficiency on a per sample basis. Samples analyzed for SVOCs were spiked with surrogate compounds during sample preparation. USEPA National Functional Guidelines for Superfund Organic Methods Data Review state how data is qualified, if surrogate spike recoveries do not meet evaluation criteria.

Surrogate recoveries were within evaluation criteria; no qualification of data was required due to surrogate recoveries.

5.0 LABORATORY CONTROL SAMPLE RECOVERIES

Laboratory control samples (LCS) are analyzed with each analytical batch to assess the accuracy of the analytical process. All spiked LCS recoveries were within evaluation criteria, with the exception summarized in the following table.

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
LCS 680-315764/14	General Chemistry	Nitrate as N	**113**	90-110

Analytical data that required qualification based on LCS data are included in the following table.

Sample ID	Parameter	Analyte	Qualification
GM-31A-0214	General Chemistry	Nitrate as N	**J**
GM-58A-0214	General Chemistry	Nitrate as N	**J**

6.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) SAMPLES

MS/MSD samples are analyzed to assess the accuracy and precision of the analytical process on an analytical sample in a particular matrix. MS/MSD samples were to be collected at a frequency of one per 20 investigative samples in accordance with the work plan. URS Corporation submitted one MS/MSD sample set for two investigative samples, meeting the work plan frequency requirement.

Sample GM-58A-0214 was spiked and analyzed for SVOCs. Although not requested, sample GM-31A-0214 was spiked and analyzed for sulfate. All MS/MSD recoveries were within evaluation criteria, with the exception summarized in the following table:

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/ RPD Criteria
GM-58A-0214	SVOCs	1-chloro-2,4-dinitrobenzene	**150/143**	5	10-130/50

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone. LCS recoveries were within evaluation criteria or analytes were previously qualified in Section 5.0. Additionally, MS/MSD recovery for sulfate could not be evaluated in sample GM-31A-0214 because sample concentrations were greater than four times (4X) the matrix spike concentration. No qualification of data was required.

7.0 FIELD DUPLICATE RESULTS

Field duplicate results are used to evaluate precision of the entire data collection activity, including sampling, analysis and site heterogeneity. When results for both duplicate and sample values are greater than five times the practical quantitation limit (PQL), satisfactory precision is indicated by an RPD less than or equal to 25 percent for aqueous samples. Where one or both of the results of a field duplicate pair are reported at less than five times the PQL, satisfactory precision is indicated if the field duplicate results agree within 2 times the quantitation limit. Field duplicate results that do not meet these criteria may indicate unsatisfactory precision of the results.

One field duplicate sample was collected for the two investigative samples. This satisfies the requirement in the work plan (one per 10 investigative samples or 10 percent). Groundwater field duplicate RPDs were within evaluation criteria. No qualification of data was required.

8.0 INTERNAL STANDARD RESPONSES

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. IS areas must be within -50 percent to +100 percent for

SVOCs. Also, the IS retention times must be within 30 seconds of the preceding IS CV retention time.

The internal standards area responses for the SVOCs were verified for the data reviews. IS responses met the criteria, with the exception summarized in the following table.

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
GM-31A-0214-EB	PAHs	Perylene-d12	**135731**	810414-3241654

Analytical data did not require qualification based on internal standard data associated with the equipment blank. Equipment blanks are quality control samples and are not qualified. No qualification of data was required.

9.0 RESULTS REPORTED FROM DILUTIONS

Sample GM-31A-0214 was diluted due to high levels of nitrate, and samples GM-31A-0214 and GM-58A-0214 were diluted due to high levels of sulfate. The diluted sample results for nitrate and sulfate were reported at the lowest possible reporting limit.

10.0 ADDITIONAL QUALIFICATIONS

SVOC continuing calibration verification (CCV) recovery was outside evaluation criteria for pentachlorophenol. Data requiring qualification is summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
GM-31A-0214	SVOCs	Pentachlorophenol	**UJ**
GM-58A-0214	SVOCs	Pentachlorophenol	**UJ**
GM-31A-0214-AD	SVOCs	Pentachlorophenol	**UJ**

Additionally, instrument calibration was outside evaluation criteria for nitrate in samples GM-31A-0214 and GM-58A-0214. However, nitrate was previously qualified due to LCS recovery data; no further qualification was required.

Appendix D

Groundwater Analytical Results
(with Data Review Reports)

Solutia Krummrich Data Review
Illinois Route 3 Drum Site 1Q14

Laboratory SDG: KOM023

Data Reviewer: Darcy Chase

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 3/14/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008.USEPA National Functional Guidelines for Superfund Inorganic Data Review 2010

Applicable Work Plan: Revised Illinois Route 3 Drum Site Operation and Maintenance Plan (Solutia 2008)

Sample Identification	
GM-31A-0214	GM-31A-F(0.2)-0214
GM-58A-0214	GM-58A-F(0.2)-0214
GM-31A-0214-AD	GM-31A-0214-EB

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOC MS/MSD recovery for 1-chloro-2,4-dinitrobenzene was outside evaluation criteria. Nitrate LCS recovery was outside evaluation criteria. MS/MSD recovery for sulfate could not be evaluated in sample GM-31A-0214 due to sample concentration greater than four times (4X) the matrix spike concentration. Recovery for the internal standard perylene-d_{12} was outside evaluation criteria for the equipment blank. Sample GM-31A-0214 was diluted due to high levels of nitrate, and samples GM-31A-0214 and GM-58A-0214 were diluted due to high levels of sulfate. The SVOC continuing calibration verification (CCV) recovery was outside evaluation criteria for pentachlorophenol. Additionally, instrument calibration was outside evaluation criteria for nitrate. These issues are addressed further in the appropriate sections below. A reissue was generated to correctly communicate nitrate LCS recovery in the laboratory case narrative on March 14, 2014.

The cooler receipt form indicated that one of three coolers was received by the laboratory at a temperature of 1.8°C which is outside the 4°C ± 2°C criteria. The samples were received in good condition; therefore no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
LCS 680-315764/14	General Chemistry	Nitrate as N	**113**	90-110

Analytical data that required qualification based on LCS data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
GM-31A-0214	General Chemistry	Nitrate as N	**J**
GM-58A-0214	General Chemistry	Nitrate as N	**J**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples collected as part of this SDG?

Yes, sample GM-58A-0214 was spiked and analyzed for SVOCs. Although not requested, sample GM-31A-0214 was spiked and analyzed for sulfate.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/ RPD Criteria
GM-58A-0214	SVOCs	1-chloro-2,4-dinitrobenzene	**150/143**	5	10-130/50

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone. LCS recoveries were within evaluation criteria or analytes were previously qualified in Section 5.0. Additionally, MS/MSD recovery for sulfate could not be evaluated in sample GM-31A-0214 because sample concentrations were greater than four times (4X) the matrix spike concentration. No qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
GM-31A-0214-EB	PAHs	Perylene-d_{12}	**135731**	810414-3241654

Analytical data did not require qualification based on internal standard data associated with the equipment blank. Equipment blanks are quality control samples and are not qualified. No qualification of data was required.

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples performed as part of this SDG?

Yes, sample GM-31A-0214 was duplicated and analyzed for alkalinity and carbon dioxide, free.

Were laboratory duplicate sample RPDs within criteria?

Yes

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
GM-31A-0214	GM-31A-0214-AD

Were field duplicate sample RPDs within evaluation criteria?

Yes

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, SVOC continuing calibration verification (CCV) recovery was outside evaluation criteria for pentachlorophenol. Data requiring qualification is summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
GM-31A-0214	SVOCs	Pentachlorophenol	**UJ**
GM-58A-0214	SVOCs	Pentachlorophenol	**UJ**
GM-31A-0214-AD	SVOCs	Pentachlorophenol	**UJ**

Additionally, instrument calibration was outside evaluation criteria for nitrate in samples GM-31A-0214 and GM-58A-0214. However, nitrate was previously qualified in Section

5.0 of this data review due to LCS recovery data; no further qualification of samples was required.

SDG KOM023

Results of Samples from Monitoring Wells:

GM-31A
GM-58A

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-98618-1
TestAmerica Sample Delivery Group: KOM023
Client Project/Site: WGK Route 3 GW Sampling 1Q14
Revision: 1

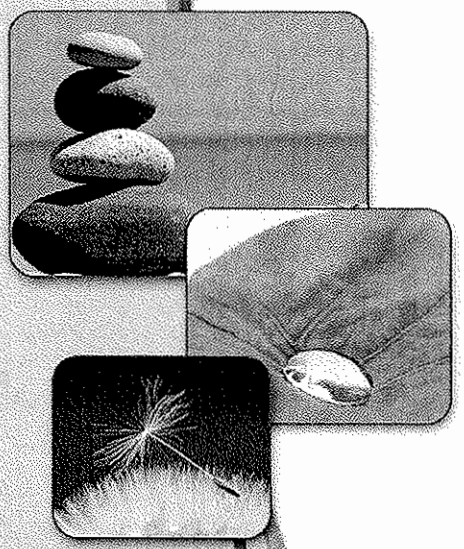
For:
URS Corporation
1001 Highlands Plaza Drive West
Suite 300
St. Louis, Missouri 63110

Attn: Mr. Bob Billman

Michele R Kersey

Authorized for release by:
3/12/2014 5:58:31 PM

Michele Kersey, Project Manager I
(912)354-7858
michele.kersey@testamericainc.com



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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Reviewed on MAR 14 2014 DAC

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F1	MS and/or MSD Recovery exceeds the control limits

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

MAR 14 2014

Sample Summary

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-98618-1	GM-31A-0214	Water	02/13/14 13:05	02/14/14 10:07
680-98618-2	GM-31A-F(0.2)-0214	Water	02/13/14 13:05	02/14/14 10:07
680-98618-3	GM-58A-0214	Water	02/13/14 11:10	02/14/14 10:07
680-98618-4	GM-58A-F(0.2)-0214	Water	02/13/14 11:10	02/14/14 10:07
680-98618-5	GM-31A-0214-AD	Water	02/13/14 13:05	02/14/14 10:07
680-98618-6	GM-31A-0214-EB	Water	02/13/14 12:10	02/14/14 10:07

MAR 14 2014

CASE NARRATIVE

Client: URS Corporation

Project: WGK Route 3 GW Sampling 1Q14

Report Number: 680-98618-1 Revision 1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 2/14/2014 10:07 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.8° C, 2.8° C and 4.4° C.

NOTES: Report revised to edit Nitrate reference in case narrative.

SEMIVOLATILE ORGANIC COMPOUNDS (AQUEOUS)

Samples GM-31A-0214 (680-98618-1), GM-58A-0214 (680-98618-3), GM-31A-0214-AD (680-98618-5) and GM-31A-0214-EB (680-98618-6) were analyzed for Semivolatile Organic Compounds (Aqueous) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 02/17/2014 and analyzed on 02/20/2014 and 02/21/2014.

1-chloro-2,4-dinitrobenzene exceeded the recovery criteria high for the MS and MSD of samples GM-58A-0214-MS (680-98618-3), GM-58A-0214-MSDMSD (680-98618-3) in batch 680-316543.

The continuing calibration verification (CCV) analyzed in batch 316543 was outside the method criteria for the following analyte(s): Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Refer to the QC report for details.

No other difficulties were encountered during the semivolatiles analysis.

All other quality control parameters were within the acceptance limits.

DISSOLVED GASES

Samples GM-31A-0214 (680-98618-1) and GM-58A-0214 (680-98618-3) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 02/25/2014.

No difficulties were encountered during the dissolved gases analysis.

All quality control parameters were within the acceptance limits.

METALS (ICP)

Samples GM-31A-F(0.2)-0214 (680-98618-2) and GM-58A-F(0.2)-0214 (680-98618-4) were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared and analyzed on 02/19/2014.

MAR 14 2014

Job ID: 680-98618-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

METALS (ICP)

Samples GM-31A-0214 (680-98618-1) and GM-58A-0214 (680-98618-3) were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/17/2014 and analyzed on 02/18/2014.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

ALKALINITY

Samples GM-31A-0214 (680-98618-1) and GM-58A-0214 (680-98618-3) were analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 02/24/2014.

No difficulties were encountered during the alkalinity analysis.

All quality control parameters were within the acceptance limits.

CHLORIDE

Samples GM-31A-0214 (680-98618-1) and GM-58A-0214 (680-98618-3) were analyzed for Chloride in accordance with EPA Method 325.2. The samples were analyzed on 02/18/2014.

No difficulties were encountered during the chloride analysis.

All quality control parameters were within the acceptance limits.

NITRATE-NITRITE AS NITROGEN

Samples GM-31A-0214 (680-98618-1) and GM-58A-0214 (680-98618-3) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 02/14/2014.

The nitrate result is obtained from a calculation incorporating the nitrite and nitrate + nitrite results. Re-analysis is not performed if QC for the calculated analyte does not meet acceptance criteria, provided the QC results for the component analytes are acceptable. Data have been qualified to denote this situation.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for batch 315764 recovered outside control limits for the following analytes: nitrate.

Refer to the QC report for details.

Sample GM-31A-0214 (680-98618-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the nitrate-nitrite analysis.

All other quality control parameters were within the acceptance limits.

SULFATE

Samples GM-31A-0214 (680-98618-1) and GM-58A-0214 (680-98618-3) were analyzed for sulfate in accordance with EPA Method 375.4. The samples were analyzed on 02/18/2014.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 316247 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Refer to the QC report for details.

MAR 14 2014

Job ID: 680-98618-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

Samples GM-31A-0214 (680-98618-1)[5X] and GM-58A-0214 (680-98618-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the sulfate analysis.

All other quality control parameters were within the acceptance limits.

TOTAL ORGANIC CARBON

Samples GM-31A-0214 (680-98618-1) and GM-58A-0214 (680-98618-3) were analyzed for total organic carbon in accordance with EPA Method 415.1. The samples were analyzed on 02/20/2014.

No difficulties were encountered during the TOC analysis.

All quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON (DOC)

Samples GM-31A-F(0.2)-0214 (680-98618-2) and GM-58A-F(0.2)-0214 (680-98618-4) were analyzed for Dissolved Organic Carbon (DOC) in accordance with EPA Method 415.1. The samples were analyzed on 02/20/2014.

No difficulties were encountered during the DOC analysis.

All quality control parameters were within the acceptance limits.

MAR 14 2014

Client Sample Results

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Client Sample ID: GM-31A-0214
Date Collected: 02/13/14 13:05
Date Received: 02/14/14 10:07

Lab Sample ID: 680-98618-1
Matrix: Water

5

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	9.6	U	9.6		ug/L		02/17/14 15:09	02/20/14 22:58	1
1-chloro-2,4-dinitrobenzene	9.6	U	9.6		ug/L		02/17/14 15:09	02/20/14 22:58	1
1-Chloro-3-nitrobenzene	9.6	U	9.6		ug/L		02/17/14 15:09	02/20/14 22:58	1
2-chloronitrobenzene / 4-chloronitrobenzene	19	U	19		ug/L		02/17/14 15:09	02/20/14 22:58	1
3,4-Dichloronitrobenzene	9.6	U	9.6		ug/L		02/17/14 15:09	02/20/14 22:58	1
2,4-Dichlorophenol	9.6	U	9.6		ug/L		02/17/14 15:09	02/20/14 22:58	1
Nitrobenzene	9.6	U	9.6		ug/L		02/17/14 15:09	02/20/14 22:58	1
2-Nitrobiphenyl	14		9.6		ug/L		02/17/14 15:09	02/20/14 22:58	1
3-Nitrobiphenyl	9.6	U	9.6		ug/L		02/17/14 15:09	02/20/14 22:58	1
4-Nitrobiphenyl	9.6	U	9.6		ug/L		02/17/14 15:09	02/20/14 22:58	1
Pentachlorophenol	48	U WJ	48		ug/L		02/17/14 15:09	02/20/14 22:58	1
2,4,6-Trichlorophenol	17		9.6		ug/L		02/17/14 15:09	02/20/14 22:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*38 - 130*	*02/17/14 15:09*	*02/20/14 22:58*	*1*
2-Fluorophenol	*42*		*25 - 130*	*02/17/14 15:09*	*02/20/14 22:58*	*1*
Nitrobenzene-d5	*57*		*39 - 130*	*02/17/14 15:09*	*02/20/14 22:58*	*1*
Phenol-d5	*29*		*25 - 130*	*02/17/14 15:09*	*02/20/14 22:58*	*1*
Terphenyl-d14	*22*		*10 - 143*	*02/17/14 15:09*	*02/20/14 22:58*	*1*
2,4,6-Tribromophenol	*75*		*31 - 141*	*02/17/14 15:09*	*02/20/14 22:58*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	1.1	U	1.1		ug/L			02/25/14 14:08	1
Ethylene	1.0	U	1.0		ug/L			02/25/14 14:08	1
Methane	44		0.58		ug/L			02/25/14 14:08	1

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.47		0.050		mg/L		02/17/14 10:19	02/18/14 13:39	1
Manganese	0.80		0.010		mg/L		02/17/14 10:19	02/18/14 13:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29		1.0		mg/L			02/18/14 12:21	1
Nitrate as N	3.8	* ^ J	0.25		mg/L			02/14/14 15:56	5
Sulfate	110		25		mg/L			02/18/14 17:27	5
Total Organic Carbon	3.9		1.0		mg/L			02/20/14 04:36	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	320		5.0		mg/L			02/24/14 17:44	1
Carbon Dioxide, Free	39		5.0		mg/L			02/24/14 17:44	1

MAR 14 2014

Client Sample Results

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Client Sample ID: GM-31A-F(0.2)-0214
Date Collected: 02/13/14 13:05
Date Received: 02/14/14 10:07

Lab Sample ID: 680-98618-2
Matrix: Water

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	0.13		0.050		mg/L		02/19/14 09:21	02/19/14 20:57	1
Manganese, Dissolved	0.88		0.010		mg/L		02/19/14 09:21	02/19/14 20:57	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	3.7		1.0		mg/L			02/20/14 17:20	1

MAR 14 2014

Client Sample Results

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Client Sample ID: GM-58A-0214
Date Collected: 02/13/14 11:10
Date Received: 02/14/14 10:07

Lab Sample ID: 680-98618-3
Matrix: Water

5

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	9.9	U	9.9		ug/L		02/17/14 15:09	02/20/14 23:22	1
1-chloro-2,4-dinitrobenzene	9.9	U	9.9		ug/L		02/17/14 15:09	02/20/14 23:22	1
1-Chloro-3-nitrobenzene	9.9	U	9.9		ug/L		02/17/14 15:09	02/20/14 23:22	1
2-chloronitrobenzene / 4-chloronitrobenzene	66		20		ug/L		02/17/14 15:09	02/20/14 23:22	1
3,4-Dichloronitrobenzene	9.9	U	9.9		ug/L		02/17/14 15:09	02/20/14 23:22	1
2,4-Dichlorophenol	9.9	U	9.9		ug/L		02/17/14 15:09	02/20/14 23:22	1
Nitrobenzene	9.9	U	9.9		ug/L		02/17/14 15:09	02/20/14 23:22	1
2-Nitrobiphenyl	9.9	U	9.9		ug/L		02/17/14 15:09	02/20/14 23:22	1
3-Nitrobiphenyl	9.9	U	9.9		ug/L		02/17/14 15:09	02/20/14 23:22	1
4-Nitrobiphenyl	9.9	U	9.9		ug/L		02/17/14 15:09	02/20/14 23:22	1
Pentachlorophenol	50	U UJ	50		ug/L		02/17/14 15:09	02/20/14 23:22	1
2,4,6-Trichlorophenol	14		9.9		ug/L		02/17/14 15:09	02/20/14 23:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*43*		*38 - 130*	*02/17/14 15:09*	*02/20/14 23:22*	*1*
2-Fluorophenol	*44*		*25 - 130*	*02/17/14 15:09*	*02/20/14 23:22*	*1*
Nitrobenzene-d5	*48*		*39 - 130*	*02/17/14 15:09*	*02/20/14 23:22*	*1*
Phenol-d5	*42*		*25 - 130*	*02/17/14 15:09*	*02/20/14 23:22*	*1*
Terphenyl-d14	*32*		*10 - 143*	*02/17/14 15:09*	*02/20/14 23:22*	*1*
2,4,6-Tribromophenol	*54*		*31 - 141*	*02/17/14 15:09*	*02/20/14 23:22*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	1.1	U	1.1		ug/L			02/25/14 14:21	1
Ethylene	1.0	U	1.0		ug/L			02/25/14 14:21	1
Methane	0.58	U	0.58		ug/L			02/25/14 14:21	1

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.050	U	0.050		mg/L		02/17/14 10:19	02/18/14 13:22	1
Manganese	0.92		0.010		mg/L		02/17/14 10:19	02/18/14 13:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35		1.0		mg/L			02/18/14 12:21	1
Nitrate as N	0.85	J	0.050		mg/L			02/14/14 15:38	1
Sulfate	130		25		mg/L			02/18/14 17:29	5
Total Organic Carbon	3.6		1.0		mg/L			02/20/14 04:52	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	360		5.0		mg/L			02/24/14 19:31	1
Carbon Dioxide, Free	19		5.0		mg/L			02/24/14 19:31	1

MAR 14 2014

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Client Sample ID: GM-58A-F(0.2)-0214
Date Collected: 02/13/14 11:10
Date Received: 02/14/14 10:07

Lab Sample ID: 680-98618-4
Matrix: Water

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	0.050	U	0.050		mg/L		02/19/14 09:21	02/19/14 21:02	1
Manganese, Dissolved	0.95		0.010		mg/L		02/19/14 09:21	02/19/14 21:02	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	3.5		1.0		mg/L			02/20/14 17:39	1

MAR 14 2014

Client Sample Results

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Client Sample ID: GM-31A-0214-AD
Date Collected: 02/13/14 13:05
Date Received: 02/14/14 10:07

Lab Sample ID: 680-98618-5
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	10	U	10		ug/L		02/17/14 15:09	02/20/14 23:46	1
1-chloro-2,4-dinitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/20/14 23:46	1
1-Chloro-3-nitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/20/14 23:46	1
2-chloronitrobenzene / 4-chloronitrobenzene	20	U	20		ug/L		02/17/14 15:09	02/20/14 23:46	1
3,4-Dichloronitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/20/14 23:46	1
2,4-Dichlorophenol	10	U	10		ug/L		02/17/14 15:09	02/20/14 23:46	1
Nitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/20/14 23:46	1
2-Nitrobiphenyl	18		10		ug/L		02/17/14 15:09	02/20/14 23:46	1
3-Nitrobiphenyl	10	U	10		ug/L		02/17/14 15:09	02/20/14 23:46	1
4-Nitrobiphenyl	10	U	10		ug/L		02/17/14 15:09	02/20/14 23:46	1
Pentachlorophenol	50	U UJ	50		ug/L		02/17/14 15:09	02/20/14 23:46	1
2,4,6-Trichlorophenol	22		10		ug/L		02/17/14 15:09	02/20/14 23:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*38 - 130*	*02/17/14 15:09*	*02/20/14 23:46*	*1*
2-Fluorophenol	*73*		*25 - 130*	*02/17/14 15:09*	*02/20/14 23:46*	*1*
Nitrobenzene-d5	*77*		*39 - 130*	*02/17/14 15:09*	*02/20/14 23:46*	*1*
Phenol-d5	*79*		*25 - 130*	*02/17/14 15:09*	*02/20/14 23:46*	*1*
Terphenyl-d14	*70*		*10 - 143*	*02/17/14 15:09*	*02/20/14 23:46*	*1*
2,4,6-Tribromophenol	*105*		*31 - 141*	*02/17/14 15:09*	*02/20/14 23:46*	*1*

MAR 14 2014
DAC

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Client Sample ID: GM-31A-0214-EB
Date Collected: 02/13/14 12:10
Date Received: 02/14/14 10:07

Lab Sample ID: 680-98618-6
Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	10	U	10		ug/L		02/17/14 15:09	02/21/14 00:09	1
1-chloro-2,4-dinitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/21/14 00:09	1
1-Chloro-3-nitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/21/14 00:09	1
2-chloronitrobenzene / 4-chloronitrobenzene	21	U	21		ug/L		02/17/14 15:09	02/21/14 00:09	1
3,4-Dichloronitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/21/14 00:09	1
2,4-Dichlorophenol	10	U	10		ug/L		02/17/14 15:09	02/21/14 00:09	1
Nitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/21/14 00:09	1
2-Nitrobiphenyl	10	U	10		ug/L		02/17/14 15:09	02/21/14 00:09	1
3-Nitrobiphenyl	10	U	10		ug/L		02/17/14 15:09	02/21/14 00:09	1
4-Nitrobiphenyl	10	U	10		ug/L		02/17/14 15:09	02/21/14 00:09	1
Pentachlorophenol	52	U	52		ug/L		02/17/14 15:09	02/21/14 00:09	1
2,4,6-Trichlorophenol	10	U	10		ug/L		02/17/14 15:09	02/21/14 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*106*		*38 - 130*	*02/17/14 15:09*	*02/21/14 00:09*	*1*
2-Fluorophenol	*82*		*25 - 130*	*02/17/14 15:09*	*02/21/14 00:09*	*1*
Nitrobenzene-d5	*82*		*39 - 130*	*02/17/14 15:09*	*02/21/14 00:09*	*1*
Phenol-d5	*70*		*25 - 130*	*02/17/14 15:09*	*02/21/14 00:09*	*1*
Terphenyl-d14	*129*		*10 - 143*	*02/17/14 15:09*	*02/21/14 00:09*	*1*
2,4,6-Tribromophenol	*129*		*31 - 141*	*02/17/14 15:09*	*02/21/14 00:09*	*1*

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Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-315814/8-A
Matrix: Water
Analysis Batch: 316543

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 315814

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	10	U	10		ug/L		02/17/14 15:09	02/20/14 19:26	1
1-chloro-2,4-dinitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/20/14 19:26	1
1-Chloro-3-nitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/20/14 19:26	1
2-chloronitrobenzene / 4-chloronitrobenzene	20	U	20		ug/L		02/17/14 15:09	02/20/14 19:26	1
3,4-Dichloronitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/20/14 19:26	1
2,4-Dichlorophenol	10	U	10		ug/L		02/17/14 15:09	02/20/14 19:26	1
Nitrobenzene	10	U	10		ug/L		02/17/14 15:09	02/20/14 19:26	1
2-Nitrobiphenyl	10	U	10		ug/L		02/17/14 15:09	02/20/14 19:26	1
3-Nitrobiphenyl	10	U	10		ug/L		02/17/14 15:09	02/20/14 19:26	1
4-Nitrobiphenyl	10	U	10		ug/L		02/17/14 15:09	02/20/14 19:26	1
Pentachlorophenol	50	U	50		ug/L		02/17/14 15:09	02/20/14 19:26	1
2,4,6-Trichlorophenol	10	U	10		ug/L		02/17/14 15:09	02/20/14 19:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*81*		*38 - 130*	*02/17/14 15:09*	*02/20/14 19:26*	*1*
2-Fluorophenol	*79*		*25 - 130*	*02/17/14 15:09*	*02/20/14 19:26*	*1*
Nitrobenzene-d5	*81*		*39 - 130*	*02/17/14 15:09*	*02/20/14 19:26*	*1*
Phenol-d5	*79*		*25 - 130*	*02/17/14 15:09*	*02/20/14 19:26*	*1*
Terphenyl-d14	*97*		*10 - 143*	*02/17/14 15:09*	*02/20/14 19:26*	*1*
2,4,6-Tribromophenol	*97*		*31 - 141*	*02/17/14 15:09*	*02/20/14 19:26*	*1*

Lab Sample ID: LCS 680-315814/15-A
Matrix: Water
Analysis Batch: 316543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 315814

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-chloro-2,4-dinitrobenzene	100	98.2		ug/L		98	10 - 130
1-Chloro-3-nitrobenzene	100	90.3		ug/L		90	10 - 130
2-chloronitrobenzene / 4-chloronitrobenzene	200	170		ug/L		85	10 - 130
3,4-Dichloronitrobenzene	100	89.2		ug/L		89	10 - 130
2-Nitrobiphenyl	100	88.9		ug/L		89	10 - 130
3-Nitrobiphenyl	100	92.2		ug/L		92	10 - 130
4-Nitrobiphenyl	100	94.0		ug/L		94	10 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*70*		*38 - 130*
2-Fluorophenol	*78*		*25 - 130*
Nitrobenzene-d5	*82*		*39 - 130*
Phenol-d5	*77*		*25 - 130*
Terphenyl-d14	*101*		*10 - 143*
2,4,6-Tribromophenol	*84*		*31 - 141*

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Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-315814/9-A
Matrix: Water
Analysis Batch: 316543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 315814

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	100	69.4		ug/L		69	54 - 130
2,4-Dichlorophenol	100	77.9		ug/L		78	54 - 130
Nitrobenzene	100	69.7		ug/L		70	56 - 130
Pentachlorophenol	100	71.1		ug/L		71	42 - 138
2,4,6-Trichlorophenol	100	87.5		ug/L		88	57 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*76*		*38 - 130*
2-Fluorophenol	*67*		*25 - 130*
Nitrobenzene-d5	*73*		*39 - 130*
Phenol-d5	*67*		*25 - 130*
Terphenyl-d14	*94*		*10 - 143*
2,4,6-Tribromophenol	*100*		*31 - 141*

Lab Sample ID: 680-98618-3 MS
Matrix: Water
Analysis Batch: 316543

Client Sample ID: GM-58A-0214-MS
Prep Type: Total/NA
Prep Batch: 315814

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1-chloro-2,4-dinitrobenzene	9.9	U	99.4	149	F1	ug/L		150	10 - 130
1-Chloro-3-nitrobenzene	9.9	U	99.4	78.4		ug/L		79	10 - 130
2-chloronitrobenzene / 4-chloronitrobenzene	66		199	238		ug/L		87	10 - 130
3,4-Dichloronitrobenzene	9.9	U	99.4	77.0		ug/L		77	10 - 130
2-Nitrobiphenyl	9.9	U	99.4	90.4		ug/L		86	10 - 130
3-Nitrobiphenyl	9.9	U	99.4	80.9		ug/L		81	10 - 130
4-Nitrobiphenyl	9.9	U	99.4	82.1		ug/L		83	10 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*56*		*38 - 130*
2-Fluorophenol	*59*		*25 - 130*
Nitrobenzene-d5	*67*		*39 - 130*
Phenol-d5	*50*		*25 - 130*
Terphenyl-d14	*69*		*10 - 143*
2,4,6-Tribromophenol	*78*		*31 - 141*

Lab Sample ID: 680-98618-3 MSD
Matrix: Water
Analysis Batch: 316543

Client Sample ID: GM-58A-0214-MSD
Prep Type: Total/NA
Prep Batch: 315814

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-chloro-2,4-dinitrobenzene	9.9	U	98.6	141	F1	ug/L		143	10 - 130	6	50
1-Chloro-3-nitrobenzene	9.9	U	98.6	59.8		ug/L		61	10 - 130	27	50
2-chloronitrobenzene / 4-chloronitrobenzene	66		197	188		ug/L		62	10 - 130	23	50
3,4-Dichloronitrobenzene	9.9	U	98.6	63.1		ug/L		64	10 - 130	20	50
2-Nitrobiphenyl	9.9	U	98.6	83.5		ug/L		80	10 - 130	8	50
3-Nitrobiphenyl	9.9	U	98.6	76.6		ug/L		78	10 - 130	6	50

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Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-98618-3 MSD
Matrix: Water
Analysis Batch: 316543

Client Sample ID: GM-58A-0214-MSD
Prep Type: Total/NA
Prep Batch: 315814

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Nitrobiphenyl	9.9	U	98.6	78.4		ug/L		79	10 - 130	5	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*48*		*38 - 130*
2-Fluorophenol	*48*		*25 - 130*
Nitrobenzene-d5	*57*		*39 - 130*
Phenol-d5	*51*		*25 - 130*
Terphenyl-d14	*77*		*10 - 143*
2,4,6-Tribromophenol	*73*		*31 - 141*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-317026/8
Matrix: Water
Analysis Batch: 317026

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	1.1	U	1.1		ug/L			02/25/14 11:41	1
Ethylene	1.0	U	1.0		ug/L			02/25/14 11:41	1
Methane	0.58	U	0.58		ug/L			02/25/14 11:41	1
Methane (TCD)	390	U	390		ug/L			02/25/14 11:41	1

Lab Sample ID: LCS 680-317026/4
Matrix: Water
Analysis Batch: 317026

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	264		ug/L		91	75 - 125
Ethylene	269	254		ug/L		94	75 - 125
Methane	154	131		ug/L		85	75 - 125

Lab Sample ID: LCS 680-317026/5
Matrix: Water
Analysis Batch: 317026

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (TCD)	1920	1480		ug/L		77	75 - 125

Lab Sample ID: LCSD 680-317026/6
Matrix: Water
Analysis Batch: 317026

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane (TCD)	1920	1870		ug/L		97	75 - 125	24	30

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Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 680-317026/7
Matrix: Water
Analysis Batch: 317026

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	288	275		ug/L		95	75 - 125	4	30
Ethylene	269	260		ug/L		97	75 - 125	2	30
Methane	154	137		ug/L		89	75 - 125	4	30

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-316140/1-A
Matrix: Water
Analysis Batch: 316258

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 316140

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.050	U	0.050		mg/L		02/17/14 10:19	02/18/14 12:49	1
Manganese	0.010	U	0.010		mg/L		02/17/14 10:19	02/18/14 12:49	1

Lab Sample ID: LCS 680-316140/2-A
Matrix: Water
Analysis Batch: 316258

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 316140

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5.00	5.16		mg/L		103	75 - 125
Manganese	0.500	0.524		mg/L		105	75 - 125

Lab Sample ID: MB 680-316214/1-A
Matrix: Water
Analysis Batch: 316419

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 316214

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	0.050	U	0.050		mg/L		02/19/14 09:21	02/19/14 20:00	1
Manganese, Dissolved	0.010	U	0.010		mg/L		02/19/14 09:21	02/19/14 20:00	1

Lab Sample ID: LCS 660-316214/2-A
Matrix: Water
Analysis Batch: 316419

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 316214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron, Dissolved	5.00	5.15		mg/L		103	75 - 125
Manganese, Dissolved	0.500	0.536		mg/L		107	75 - 125

Method: 310.1 - Alkalinity

Lab Sample ID: MB 680-317049/5
Matrix: Water
Analysis Batch: 317049

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0		mg/L			02/24/14 16:36	1
Carbon Dioxide, Free	5.0	U	5.0		mg/L			02/24/14 16:36	1

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Method: 310.1 - Alkalinity (Continued)

Lab Sample ID: LCS 680-317049/6
Matrix: Water
Analysis Batch: 317049

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	250	223		mg/L		89	80 - 120

Lab Sample ID: LCSD 680-317049/32
Matrix: Water
Analysis Batch: 317049

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity	250	241		mg/L		96	80 - 120	8	30

Lab Sample ID: 680-98618-1 DU
Matrix: Water
Analysis Batch: 317049

Client Sample ID: GM-31A-0214
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	320		295		mg/L		9	30
Carbon Dioxide, Free	39		28.6		mg/L		30	30

Method: 325.2 - Chloride

Lab Sample ID: MB 680-316243/21
Matrix: Water
Analysis Batch: 316243

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0		mg/L			02/18/14 12:52	1

Lab Sample ID: LCS 680-316243/20
Matrix: Water
Analysis Batch: 316243

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.8		mg/L		103	85 - 115

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-315764/13
Matrix: Water
Analysis Batch: 315764

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U ^	0.050		mg/L			02/14/14 15:31	1

Lab Sample ID: LCS 680-315764/14
Matrix: Water
Analysis Batch: 315764

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.500	0.565	^ *	mg/L		113	90 - 110
Nitrate Nitrite as N	1.00	1.07		mg/L		107	90 - 110

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Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 680-315764/14
Matrix: Water
Analysis Batch: 315764

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.500	0.502		mg/L		100	90 - 110

Method: 375.4 - Sulfate

Lab Sample ID: MB 680-316247/15
Matrix: Water
Analysis Batch: 316247

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5.0	U	5.0		mg/L			02/18/14 17:29	1

Lab Sample ID: LCS 680-316247/10
Matrix: Water
Analysis Batch: 316247

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	19.8		mg/L		99	75 - 125

Lab Sample ID: 680-98618-1 MS
Matrix: Water
Analysis Batch: 316247

Client Sample ID: GM-31A-0214
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	110		20.0	120	4	mg/L		70	75 - 125

Lab Sample ID: 680-98618-1 MSD
Matrix: Water
Analysis Batch: 316247

Client Sample ID: GM-31A-0214
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	110		20.0	120	4	mg/L		72	75 - 125	0	30

Method: 415.1 - DOC

Lab Sample ID: MB 680-316600/85
Matrix: Water
Analysis Batch: 316600

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.0		mg/L			02/20/14 15:52	1

Lab Sample ID: LCS 680-316600/84
Matrix: Water
Analysis Batch: 316600

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon	20.0	20.8		mg/L		104	80 - 120

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DAC

QC Sample Results

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Method: 415.1 - TOC

Lab Sample ID: MB 680-316598/26
Matrix: Water
Analysis Batch: 316598

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0		mg/L			02/20/14 00:21	1

Lab Sample ID: LCS 680-316598/33
Matrix: Water
Analysis Batch: 316598

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	20.0	20.7		mg/L		104	80 - 120

MAR 14 2014

QC Association Summary

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

GC/MS Semi VOA

Prep Batch: 315814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-1	GM-31A-0214	Total/NA	Water	3520C	
680-98618-3	GM-58A-0214	Total/NA	Water	3520C	
680-98618-3 MS	GM-58A-0214-MS	Total/NA	Water	3520C	
680-98618-3 MSD	GM-58A-0214-MSD	Total/NA	Water	3520C	
680-98618-5	GM-31A-0214-AD	Total/NA	Water	3520C	
680-98618-6	GM-31A-0214-EB	Total/NA	Water	3520C	
LCS 680-315814/15-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 680-315814/9-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-315814/8-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 316543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-1	GM-31A-0214	Total/NA	Water	8270D	315814
680-98618-3	GM-58A-0214	Total/NA	Water	8270D	315814
680-98618-3 MS	GM-58A-0214-MS	Total/NA	Water	8270D	315814
680-98618-3 MSD	GM-58A-0214-MSD	Total/NA	Water	8270D	315814
680-98618-5	GM-31A-0214-AD	Total/NA	Water	8270D	315814
680-98618-6	GM-31A-0214-EB	Total/NA	Water	8270D	315814
LCS 680-315814/15-A	Lab Control Sample	Total/NA	Water	8270D	315814
LCS 680-315814/9-A	Lab Control Sample	Total/NA	Water	8270D	315814
MB 680-315814/8-A	Method Blank	Total/NA	Water	8270D	315814

GC VOA

Analysis Batch: 317026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-1	GM-31A-0214	Total/NA	Water	RSK-175	
680-98618-3	GM-58A-0214	Total/NA	Water	RSK-175	
LCS 680-317026/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-317026/5	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-317026/6	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-317026/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-317026/8	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 316140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-1	GM-31A-0214	Total Recoverable	Water	3005A	
680-98618-3	GM-58A-0214	Total Recoverable	Water	3005A	
LCS 680-316140/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-316140/1-A	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 316214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-2	GM-31A-F(0.2)-0214	Dissolved	Water	3005A	
680-98618-4	GM-58A-F(0.2)-0214	Dissolved	Water	3005A	
LCS 680-316214/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-316214/1-A	Method Blank	Total Recoverable	Water	3005A	

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Metals (Continued)

Analysis Batch: 316258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-1	GM-31A-0214	Total Recoverable	Water	6010C	316140
680-98618-3	GM-58A-0214	Total Recoverable	Water	6010C	316140
LCS 680-316140/2-A	Lab Control Sample	Total Recoverable	Water	6010C	316140
MB 680-316140/1-A	Method Blank	Total Recoverable	Water	6010C	316140

Analysis Batch: 316419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-2	GM-31A-F(0.2)-0214	Dissolved	Water	6010C	316214
680-98618-4	GM-58A-F(0.2)-0214	Dissolved	Water	6010C	316214
LCS 680-316214/2-A	Lab Control Sample	Total Recoverable	Water	6010C	316214
MB 680-316214/1-A	Method Blank	Total Recoverable	Water	6010C	316214

General Chemistry

Analysis Batch: 315764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-1	GM-31A-0214	Total/NA	Water	353.2	
680-98618-3	GM-58A-0214	Total/NA	Water	353.2	
LCS 680-315764/14	Lab Control Sample	Total/NA	Water	353.2	
MB 680-315764/13	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 316243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-1	GM-31A-0214	Total/NA	Water	325.2	
680-98618-3	GM-58A-0214	Total/NA	Water	325.2	
LCS 680-316243/20	Lab Control Sample	Total/NA	Water	325.2	
MB 680-316243/21	Method Blank	Total/NA	Water	325.2	

Analysis Batch: 316247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-1	GM-31A-0214	Total/NA	Water	375.4	
680-98618-1 MS	GM-31A-0214	Total/NA	Water	375.4	
680-98618-1 MSD	GM-31A-0214	Total/NA	Water	375.4	
680-98618-3	GM-58A-0214	Total/NA	Water	375.4	
LCS 680-316247/10	Lab Control Sample	Total/NA	Water	375.4	
MB 680-316247/15	Method Blank	Total/NA	Water	375.4	

Analysis Batch: 316598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-1	GM-31A-0214	Total/NA	Water	415.1	
680-98618-3	GM-58A-0214	Total/NA	Water	415.1	
LCS 680-316598/33	Lab Control Sample	Total/NA	Water	415.1	
MB 680-316598/26	Method Blank	Total/NA	Water	415.1	

Analysis Batch: 316600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-2	GM-31A-F(0.2)-0214	Dissolved	Water	415.1	
680-98618-4	GM-58A-F(0.2)-0214	Dissolved	Water	415.1	
LCS 680-316600/84	Lab Control Sample	Dissolved	Water	415.1	
MB 680-316600/85	Method Blank	Dissolved	Water	415.1	

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QC Association Summary

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

General Chemistry (Continued)

Analysis Batch: 317049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-98618-1	GM-31A-0214	Total/NA	Water	310.1	
680-98618-1 DU	GM-31A-0214	Total/NA	Water	310.1	
680-98618-3	GM-58A-0214	Total/NA	Water	310.1	
LCS 680-317049/6	Lab Control Sample	Total/NA	Water	310.1	
LCSD 680-317049/32	Lab Control Sample Dup	Total/NA	Water	310.1	
MB 680-317049/5	Method Blank	Total/NA	Water	310.1	

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Lab Chronicle

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Client Sample ID: GM-31A-0214

Date Collected: 02/13/14 13:05
Date Received: 02/14/14 10:07

Lab Sample ID: 680-98618-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1044.3 mL	1 mL	315814	02/17/14 15:09	RBS	TAL SAV
Total/NA	Analysis	8270D		1	1044.3 mL	1 mL	316543	02/20/14 22:58	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	317026	02/25/14 14:08	TAR	TAL SAV
Total Recoverable	Prep	3005A			50 mL	50 mL	316140	02/17/14 10:19	BCB	TAL SAV
Total Recoverable	Analysis	6010C		1	50 mL	50 mL	316258	02/18/14 13:39	BCB	TAL SAV
Total/NA	Analysis	353.2		5	2 mL	2 mL	315764	02/14/14 15:56	GRX	TAL SAV
Total/NA	Analysis	325.2		1	2 mL	2 mL	316243	02/18/14 12:21	JME	TAL SAV
Total/NA	Analysis	375.4		5	2 mL	2 mL	316247	02/18/14 17:27	JME	TAL SAV
Total/NA	Analysis	415.1		1	25 mL	25	316598	02/20/14 04:36	CMP	TAL SAV
Total/NA	Analysis	310.1		1	25 mL		317049	02/24/14 17:44	LBH	TAL SAV

Client Sample ID: GM-31A-F(0.2)-0214

Date Collected: 02/13/14 13:05
Date Received: 02/14/14 10:07

Lab Sample ID: 680-98618-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	316214	02/19/14 09:21	BJB	TAL SAV
Dissolved	Analysis	6010C		1	50 mL	50 mL	316419	02/19/14 20:57	BCB	TAL SAV
Dissolved	Analysis	415.1		1		25	316600	02/20/14 17:20	CMP	TAL SAV

Client Sample ID: GM-58A-0214

Date Collected: 02/13/14 11:10
Date Received: 02/14/14 10:07

Lab Sample ID: 680-98618-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			504.8 mL	0.5 mL	315814	02/17/14 15:09	RBS	TAL SAV
Total/NA	Analysis	8270D		1	504.8 mL	0.5 mL	316543	02/20/14 23:22	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	317026	02/25/14 14:21	TAR	TAL SAV
Total Recoverable	Prep	3005A			50 mL	50 mL	316140	02/17/14 10:19	BCB	TAL SAV
Total Recoverable	Analysis	6010C		1	50 mL	50 mL	316258	02/18/14 13:22	BCB	TAL SAV
Total/NA	Analysis	353.2		1	2 mL	2 mL	315764	02/14/14 15:38	GRX	TAL SAV
Total/NA	Analysis	325.2		1	2 mL	2 mL	316243	02/18/14 12:21	JME	TAL SAV
Total/NA	Analysis	375.4		5	2 mL	2 mL	316247	02/18/14 17:29	JME	TAL SAV
Total/NA	Analysis	415.1		1	25 mL	25	316598	02/20/14 04:52	CMP	TAL SAV
Total/NA	Analysis	310.1		1	25 mL		317049	02/24/14 19:31	LBH	TAL SAV

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Lab Chronicle

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Client Sample ID: GM-58A-F(0.2)-0214

Lab Sample ID: 680-98618-4
Matrix: Water

Date Collected: 02/13/14 11:10
Date Received: 02/14/14 10:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	316214	02/19/14 09:21	BJB	TAL SAV
Dissolved	Analysis	6010C		1	50 mL	50 mL	316419	02/19/14 21:02	BCB	TAL SAV
Dissolved	Analysis	415.1		1		25	316600	02/20/14 17:39	CMP	TAL SAV

Client Sample ID: GM-31A-0214-AD

Lab Sample ID: 680-98618-5
Matrix: Water

Date Collected: 02/13/14 13:05
Date Received: 02/14/14 10:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1003.3 mL	1 mL	315814	02/17/14 15:09	RBS	TAL SAV
Total/NA	Analysis	8270D		1	1003.3 mL	1 mL	316543	02/20/14 23:46	SMC	TAL SAV

Client Sample ID: GM-31A-0214-EB

Lab Sample ID: 680-98618-6
Matrix: Water

Date Collected: 02/13/14 12:10
Date Received: 02/14/14 10:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			962.6 mL	1 mL	315814	02/17/14 15:09	RBS	TAL SAV
Total/NA	Analysis	8270D		1	962.6 mL	1 mL	316543	02/21/14 00:09	SMC	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Certification Summary

Client: URS Corporation
Project/Site: WGK Route 3 GW Sampling 1Q14

TestAmerica Job ID: 680-98618-1
SDG: KOM023

Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-14
Arkansas DEQ	State Program	6	88-0692	01-31-15
California	NELAP	9	3217CA	07-31-14
Colorado	State Program	8	N/A	12-31-14
Connecticut	State Program	1	PH-0161	03-31-15
Florida	NELAP	4	E87052	06-30-14
GA Dept. of Agriculture	State Program	4	N/A	06-30-14
Georgia	State Program	4	N/A	06-30-14
Georgia	State Program	4	803	06-30-14
Guam	State Program	9	09-005r	04-17-14
Hawaii	State Program	9	N/A	06-30-14
Illinois	NELAP	5	200022	11-30-14
Indiana	State Program	5	N/A	06-30-14
Iowa	State Program	7	353	07-01-15
Kentucky (DW)	State Program	4	90084	12-31-14
Kentucky (UST)	State Program	4	18	06-30-14
Louisiana	NELAP	6	LA100015	12-31-14
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-14
Massachusetts	State Program	1	M-GA006	06-30-14
Michigan	State Program	5	9925	06-30-14
Mississippi	State Program	4	N/A	06-30-14
Montana	State Program	8	CERT0081	01-01-15
Nebraska	State Program	7	TestAmerica-Savannah	06-30-14
New Jersey	NELAP	2	GA769	06-30-14
New Mexico	State Program	6	N/A	06-30-14
New York	NELAP	2	10842	03-31-14
North Carolina DENR	State Program	4	269	12-31-14
North Carolina DHHS	State Program	4	13701	07-31-14
Oklahoma	State Program	6	9984	08-31-14
Pennsylvania	NELAP	3	68-00474	06-30-14
Puerto Rico	State Program	2	GA00006	12-31-14
South Carolina	State Program	4	98001	06-30-14
Tennessee	State Program	4	TN02961	06-30-14
Texas	NELAP	6	T104704185-08-TX	11-30-14
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-14
Washington	State Program	10	C1794	06-10-14
West Virginia DEP	State Program	3	94	06-30-14
West Virginia DHHR	State Program	3	9950C	12-31-14
Wisconsin	State Program	5	999819810	08-31-14
Wyoming	State Program	8	8TMS-L	06-30-14

MAR 14 2014

Login Sample Receipt Checklist

Client: URS Corporation

Job Number: 680-98618-1
SDG Number: KOM023

Login Number: 98618
List Number: 1
Creator: Conner, Keaton

List Source: TestAmerica Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	